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## SECTION 1: CHEMICAL PRODUCT and COMPANY IDENTIFICATION

Catalog No. 4105

**Product Name:** 2,4-Dinitrophenol, 98%  
**Manufacturer Name:** Lancaster Synthesis, Inc.  
**Supplier:** Lancaster Synthesis, Inc.  
**Address:** 1 Industrial Drive  
Pelham, NH 03076  
**Business Phone:** 603-889-3306  
**Business Fax:** 603-889-3326  
**For information  
in North America, call:** 603-889-3306  
**CHEMTREC Numbers:**  
For emergencies in the US, call CHEMTREC: 800-424-9300  
For emergencies outside US, call INTERNATIONAL: (703) 527-3887  
For Nonemergency, call: (800) 262-8200

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## SECTION 2 : COMPOSITION, INFORMATION ON INGREDIENTS

Catalog No. 4105

**Chemical Name** 2,4-Dinitrophenol  
**CAS#** 51-28-5  
**% Weight (Typical)** 98

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## SECTION 3 : HAZARDS IDENTIFICATION

Catalog No. 4105

**Emergency Overview:** Highly toxic. Reproductive effects. Mutation data. Irritant.

### 2,4-Dinitrophenol:

**Route of Exposure:** Skin. Ingestion.  
**Potential Health Effects:**  
**Eye Contact:** No data  
**Skin Contact:** Causes skin irritation.  
**Inhalation:** No data  
**Ingestion:** Highly toxic by ingestion.  
**Target Organs:** Skin. G.I. Tract. Heart. Cardiovascular. Reproductive System.

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**SECTION 8 : EXPOSURE CONTROLS, PERSONAL PROTECTION**Catalog No. 4105

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<b>Engineering Controls:</b>	Use appropriate engineering control such as process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits. Where such systems are not effective wear suitable personal protective equipment, which performs satisfactorily and meets OSHA or other recognized standards. Consult with local procedures for selection, training, inspection and maintenance of the personal protective equipment.
<b>Skin Protection Description:</b>	Wear suitable protective clothing to prevent contact with skin.
<b>Hand Protection Description:</b>	Wear appropriate protective gloves. Consult glove manufacturers for glove permeability data.
<b>Eye/Face Protection:</b>	Wear appropriate protective glasses or splash goggles as described by 29 CFR 1910.133, OSHA eye and face protection regulation, or the European standard EN 166.
<b>Respiratory Protection:</b>	A NIOSH approved air-purifying respirator with an appropriate cartridge or canister may be permissible under certain circumstances where airborne concentrations are expected to exceed exposure limits. Protection provided by air purifying respirators is limited to airborne concentrations that are typically within 10 times the exposure limit. Use a positive pressure air supplied respirator if there is any potential for an uncontrolled release, exposure levels are not known, or any other circumstances where air-purifying respirators may not provide adequate protection. A respiratory protection program that meets OSHAs 29 CFR 1910.134 and ANSI Z88.2 requirements must be followed whenever workplace conditions warrant a respirators use.
<b>Other Protective:</b>	Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower.

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**SECTION 9 : PHYSICAL and CHEMICAL PROPERTIES**Catalog No. 4105

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<b>Physical State/Appearance:</b>	Solid
<b>Color:</b>	Yellow
<b>Vapor Density:</b>	6.35
<b>Flash Point:</b>	No data
<b>Boiling Point:</b>	No data
<b>Melting Point:</b>	106-108°C (32-226.4°F) (dry)
<b>n-Octanol/water partition coefficient:</b>	1.52
<b>Solubility in Water:</b>	5.6 g/L @ 18°C (64.4°F)
<b>Density:</b>	1.683 @ 24° (Ref: Sax)
<b>Molecular Formula:</b>	C <sub>6</sub> H <sub>4</sub> N <sub>2</sub> O <sub>5</sub>
<b>Molecular Weight:</b>	184.11

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**SECTION 10 : STABILITY and REACTIVITY**Catalog No. 4105

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<b>Conditions to Avoid:</b>	Heat, flames and sparks.
<b>Incompatibilities with Other Materials:</b>	Oxidizing agents.
<b>Possible Decomposition Product:</b>	Carbon monoxide. Hydrogen cyanide, oxides of nitrogen.

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2,4-Dinitrophenol :

RTECS Number:	SL2800000
Eye Effect:	No data reported in the cited references as of the revision date.
Skin Effects:	Skin - guinea pig LDLo: 700 mg/kg (RTECS)
Ingestion Effects:	Oral - rat LD50: 30 mg/kg (RTECS); Oral - mouse LD50: oaa6 ]4o (RTECS)
Ingestion Effects:	

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**SECTION 13 : DISPOSAL CONSIDERATIONS**Catalog No. 4105

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**Waste Disposal:** Consult with the US EPA Guidelines listed in 40 CFR Part 261.3 for the classifications of hazardous waste prior to disposal. Furthermore, consult with your state and local waste requirements or guidelines, if applicable, to ensure compliance. Arrange disposal in accordance to the EPA and/or state and local guidelines, by a licensed disposal company.

**EPA Waste Number:** P048 for 2,4-Dinitrophenol CAS Number: 51-28-5

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**SECTION 14 : TRANSPORT INFORMATION**Catalog No. 4105

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**DOT Shipping Name:** Dinitrophenol, wetted [with not less than 15 percent water, by mass]

**DOT Hazard Class:** 4.1

**DOT Identification Number:** UN1320

**DOT Packing Group:** I

**DOT Subpart E Labeling Requirement:** 4.1, 6.1

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**SECTION 15 : REGULATORY INFORMATION**Catalog No. 4105

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[2,4-Dinitrophenol](#) :

**TSCA 8(b): Inventory Status:** Listed on the TSCA inventory.

**Risk Phrases:** R23/24/25 Toxic by inhalation, in contact with skin and if swallowed.  
R33 Danger of cumulative effects.  
R50 Very toxic to aquatic organisms.

**Safety Phrase:** S28 After contact with skin, wash immediately with plenty of water  
S37 Wear suitable gloves.  
S45 In case of accident or if you feel unwell, seek medical advice immediately  
S61 Avoid release to the environment. Refer to special instructions/Safety data sheets.

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**SECTION 16 : ADDITIONAL INFORMATION**Catalog No. 4105

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**MSDS Preparation Date:** January 1, 2002, Version 1

**MSDS Revision Date:** April 14, 2003.

**MSDS Author:** Actio Corporation.

**Disclaimer:**

This Health and Safety Information is correct to the best of our knowledge and belief at the date of its publication but we cannot accept liability for any loss, injury or damage which may result from its use. We shall ensure, so far as is reasonably practicable, that any revision of this Data Sheet is sent to all customers to whom we have directly supplied this substance, but must point out that it is the responsibility of any intermediate supplier to ensure that such revision is passed to the ultimate user. The information given in the Data Sheet is designed only as a guidance for safe handling, storage and the use of the substance. It is not a specification nor does it guarantee any specific properties. All chemicals should be handled only by competent personnel, within a controlled environment.

Should further information be required, this can be obtained through the sales office whose address is at the top of this data sheet. We welcome any additional information about our products that customers have obtained by personal experience.

**References:**

1. American Chemical Society, STN Easy Online Database
2. Brethericks Reactive Chemical Hazards Database. Version 2.
3. Gassarett and Doulls Toxicology, The Basic Science of Poisons.
4. Hawleys Condensed Chemical Dictionary, Thirteenth Edition
5. IARC monographs on the Evaluation of the Carcinogenic Risk of Chemicals to Man, WHO International Research on Cancer.
6. Industrial Hygiene and Toxicology, by F.A. Patty.
7. National Library of Medicine, Department of Health and Human Services, Hazardous Substances Data Bank (HSDB).
8. National Toxicology Program (NTP) Eighth Report on Carcinogens, 1997.
9. NIOSH Registry of Toxic Effects of Chemical Substances (RTECS) and Pocket Guide to Chemical Hazards.
10. OSHA Hazard Communication Standard, 1910.1200 and Z Tables.
11. Sax Dangerous Properties of Industrial Materials. Tenth Edition.
12. The Merck Index: An Encyclopedia of Chemicals and Drugs. Merck and Company. Twelfth Edition 1998.
13. Threshold Limit Values for Chemical Substances and Physical Agents in the Work Environment and Biological Exposure Indices. TLV Booklet, 2001.

